Risk Assessment
Dourine, Glanders, Equine Piroplasmosis, and
Equine Infectious Anemia in Iceland

Animal and Plant Health Inspection Service

Introduction

Purpose and Scope

This report evaluates the status of dourine, glanders, equine piroplasmosis (EP), and equine infectious anemia (EIA) in Iceland. Data for the assessment were provided by the Ministry of Agriculture, Government of Iceland.

Format

This report provides information for assessing and characterizing the status of dourine, glanders, EP, and EIA in Iceland. As stated in the Regionalization Final Rule (62 FR 5600-56026, Docket 94-106-9, _Importation of Animals and Animal Products_), the decision to permit imports from a region will be based on a risk assessment. The risk assessment must consider information about the animal health situation existing in the region and the probability that the animals and/or animal products proposed for export would transmit and establish disease in the United States. This report evaluates Iceland with respect to the 11 factors outlined in the Regionalization Policy Statement and the four equine diseases listed above. The 11 factors are:

- Authority, organization, and infrastructure of veterinary services;
- Disease surveillance;
- Diagnostic laboratory capabilities;
- Disease outbreak history and disease prevalence;
- Active disease control programs if the agent is known to exist in the region;
- Vaccination status;
- Disease prevalence and outbreak history in adjacent regions;
- Separation from regions of higher risk through physical or other barriers;
- Control of movements of animals and animal products from regions of higher risk;
- Livestock demographics and marketing practices; and
- Animal health policies and infrastructures for animal disease control.

Risk Factors

Authority, organization, and infrastructure of veterinary services in the region

Iceland has 68 veterinarians, 43 of whom are employed by the municipal or Federal government. The Minister of Agriculture, charged with supervising the Act on Veterinarians and Animal Health

Services (No. 66/1998), appoints a Veterinarians= Council of four veterinarians. One veterinarian is nominated by the Farmers_Association of Iceland, another by the Board of Directors of the Veterinarian Association of Iceland, and a third by the Board of Directors of the Institute of Experimental Pathology at Keldur. A fourth appointed by the Minister of Agriculture serves as the chairman of the council. The Chief Veterinary Officer (CVO) from the Department of Agriculture acts as a consultant to the council. The council deals with the import of livestock and/or genetic material and with other matters related to animal health and animal products, when requested to do so by the CVO. Under the Act on Veterinarians and Animal Health Services, all veterinarians in practice are required to report suspected contagious diseases to the CVO and to assist in curbing their spread. An additional Act governing animal diseases and preventive measures (Legal Gazette A, no. 25/1993) established the framework of the CVO and district veterinarians described below. The Act also requires that any person who knows or suspects that an animal has a contagious disease is required by law to report it to the police, who will, in turn, contact a veterinarian. The veterinarian must perform the appropriate tests and report all notifiable diseases to the CVO. All veterinarians and animal owners are legally required to follow the instructions of the CVO or district veterinarian. The Minister of Agriculture may prohibit the importation of animals, animal products, or supplies that may transport contagious materials. The Act gives the Minister of Agriculture the authority to quarantine animals and premises and to determine the required method to eliminate the risk of the contagion. Compensation may be provided for slaughtered animals. Failure to adhere to regulations may result in fines or imprisonment or both.

Within the Department of Agriculture, the CVO is supported by the Deputy CVO, and three divisions of veterinarians. The first division is Special Veterinarians, which covers Cattle, Mastitis, Pigs, Poultry, Fish, Fur, and Imports. The second division is composed of 27 District Veterinarians. The third division is the Animal Health Laboratory, with three veterinarians and two lab technicians. Iceland is divided into 36 fenced areas and 4 glaciers. These 36 fenced areas are grouped into 14 separate districts. District veterinarians monitor slaughter animals, slaughter products, and animal derived product centers as well as health, care, living conditions, and facilities of cattle on farms where milk is produced for sale. District veterinarians also perform disinfection procedures and monitor livestock. If necessary, the Ministry of Agriculture is authorized to hire additional veterinarians to assist in disease control and prevention.

Evaluation: APHIS believes Iceland has sufficient veterinary authority, organization, and infrastructure to prevent and/or identify and control dourine, glanders, EP, and EIA.

Disease surveillance

Iceland=s private veterinary practitioners and district veterinary officers provide continuous, passive disease surveillance nationwide for dourine, glanders, EP, and EIA. In addition, Iceland has exported 1,159 horses to North America from 1989-1998, and all were negative for dourine, glanders, EIA, and EP on serological tests.

Iceland does not have active surveillance for dourine, glanders, EP, or EIA.

Evaluation: APHIS believes Iceland has adequate surveillance for dourine, glanders, EP, and EIA. Because Iceland has never recorded a single case of any of these diseases, APHIS does not believe that active surveillance is necessary. All horses in Iceland are fully susceptible to all four diseases. If any of these diseases were introduced into Iceland=s horse population, clinical disease sufficient to ensure prompt detection by passive surveillance is very likely.

Diagnostic laboratory capabilities

Iceland has one veterinary diagnostic laboratory: the Institute of Experimental Pathology, University of Iceland. The Institute cooperates closely with Veterinary Institutes in Denmark, Norway, and Sweden. Laboratory personnel include veterinarians, bacteriologists, virologists, pathologists, and technicians.

Evaluation: APHIS believes that Iceland has sufficient diagnostic laboratory capability to diagnose dourine, glanders, EP, and EIA, if those diseases were present. This capability is reinforced by support from and in cooperation with, Danish, Norwegian, and Swedish diagnostic laboratories.

Disease outbreak history and disease prevalence

Dourine, glanders, EIA, and EP have never been identified or reported in Iceland. There are no known tick vectors of EP in Iceland.

Evaluation: APHIS believes that Iceland would have identified and reported dourine, glanders, EP, and EIA, if those diseases had been, or were now, present.

Active disease control programs, if any, if the agent is known to exist in the region

The agents do not exist in the region.

Evaluation: APHIS believes that active disease control programs are not appropriate since dourine, glanders, EP, and EIA are not known to exist in Iceland.

Vaccination status

No vaccine for these diseases exists.

Evaluation: APHIS believes Iceland=s horse population is fully susceptible to dourine, glanders, EP, and EIA.

Disease prevalence and outbreak history in adjacent regions

Iceland is an island nation with no adjacent regions.

Evaluation: APHIS believes that adjacent regions pose no identifiable risk to Iceland for the introduction of these four diseases.

Separation of the region from regions of higher risk through physical or other barriers

Iceland is an island nation that is separated from Scotland (700 miles) and Norway (800 miles) by the Norwegian Sea and the North Atlantic Ocean.

Evaluation: APHIS believes that the North Atlantic Ocean and the Norwegian Sea provide sufficient physical barriers to isolate effectively Iceland from any areas of higher risk for dourine, glanders, EP, and EIA.

Control of movements of animals and animal products from regions of higher risk

Iceland has not imported horses for 110 years. Strict legal requirements for importing any livestock are specified in the Act governing the import of animals (Legal Gazette, A, NO. 54/1990). Importing live animals is banned except for breeding purposes. Animals imported for breeding are kept in isolation units approved by the government. Veterinarians are hired by the importer to work only in these isolations units. If semen or embryos are being imported, an isolation unit is established for local animals that are used as breeding stock. The breeding stock are not allowed out of the permanet isolation unit. Only progeny born from the imported animals or the imported genetic material are allowed to be moved from the isolation units and to comingle with the national population. The isolation units are normally located on an island in one of the fjords in Iceland. Before movement of the progeny of the imported breeding animal out of the isolation unit is permitted, health certificates and testing are required by the Ministry of Agriculture and the CVO.

Evaluation: APHIS believes that Iceland=s control of the movement of horses from regions of higher risk is sufficient to ensure that the probability of introducing dourine, glanders, EP, and EIA is acceptably low.

Livestock demographics and marketing practices

Iceland has 79,434 horses on 2,915 farms. No restrictions exist on the movement of horses within Iceland.

Evaluation: APHIS believes that since dourine, glanders, EP, and EIA have not been identified in Iceland, internal sanitary restrictions to control these diseases are not necessary. APHIS further believes that, if any of these diseases were identified, Iceland has a sufficient regulatory infrastructure to initiate sanitary controls within an adequate time.

Animal health policies and infrastructure for animal disease control

Animal health policies outlined in the Act governing the import of animals (Legal Gazette, A, NO. 54/1990) define a very strict import policy. The Act governing animal diseases and preventive measures against them (Legal Gazette, A, no. 25/1993) outlines the policy of the Ministry of Agriculture and the CVO that all animal owners and veterinarians have a legal responsibility to report sick animals. The Act also authorizes all appropriate responses (including quarantine, test and slaughter, movement restrictions, and disinfection of premises) to control the spread of animal disease.

Evaluation: APHIS believes that Iceland has sufficient authority, policies, personnel, and infrastructure to respond swiftly and appropriately if dourine, glanders, EIA, or EP is identified in Icelandic horses.

Overall Evaluation

APHIS believes sufficient evidence exists that dourine, glanders, EP, and EIA are not, and have not been, present in Iceland. The agency does not believe that a quantitative evaluation of the probability that horses exported from Iceland to the United States would transmit any of these diseases is necessary.

References

Act on veterinarians and animal health services. No. 66/1998. Approved in the Althingi 4 June 1998.

Act governing animal diseases and preventive measures against them. Legal Gazette A, no. 25/1993. Reykjavik, 7 April 1993.

Act governing the import of animals. Legal Gazette, A, no.54/1990. Reykjavik, 16 May 1990.

Organizational chart of veterinary services, December 1998.

Map of Iceland_s Fenced-off Areas.

Excerpt of OIE Animal Health Report for Iceland, 1997.

Serologic test results on Icelandic horses to 22 known horse disease viruses and 2 bacteria, and serologic test results for dourine, glanders, equine piroplasmosis, and equine infectious anemia from 1,159 horses (1989-1998). BS/250299.

Iceland, Information for recognition of a region. BS/250299.